State• University• Market: Sixty Years' Evolution of University-affiliated Architectural Design Institute in China*

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Abstract:

University-affiliated Architectural Design Institute (UADI) is a unique professional organization in China. The trajectory of UADI embodies China's political, economic, social and cultural transformation for the passing six decades, especially due to its role in the rapid urbanization. UADI was established in 1958 as a product of Education Revolution and Great Leap Forward. After China's economic reform in 1978, especially the establishment of Socialist market economy in 1992, UADI became an experimental field for architectural creation as well as organizational and economic reform in Universities. Since entering the new millennia, UADI has served as a representative of National University Sciences and Technology Park (NUSTP) and University-centered Design and Creative Industrial Cluster (UDCIC), integrating production, education and research, exhibiting strong and incessant economic and cultural power. Through examining three historical phrases of UADI, the research aims at exploring the transition of Architecture discipline and profession in modern China, as well as the changing relationship between Chinese academic architects and the state and market.

Key Words: Architectural Design Institute, Education of Architect, Design Organization, Chinese Modern Architecture, Rapid Urbanization

* This article is partly based on the following paper: Xiahong HUA 华霞虹, University-affiliated Design Institute and the Educational Revolution of Architecture: Case Studying the Organization and Practice of Tongji University-affiliated Architectural Design Institute from 1958 to 1965, *Time+Architecture 时代建筑*, 2018 (05): pp.22-27. The author would like to express her appreciation to Architectural Design and Research Institute (Group) Ltd of Tongji University (TJAD) for supporting her research on topics of "Sixty Years History of Tongji University Architectural Design Institute" and "Architectural Design as Modern Institution".

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University-affiliated Architectural Design Institute (UADI, Daxue Fushu Jianzhu Shejiyuan, 大学附属建筑设计院) is a unique professional organization in China. This institutional form was forged in 1958, the historical period of Great Leap Forward as an intern section for architecture and civil engineering departments in universities specializing in building related academic fields. Far beyond the college version of state-owned Architectural Design Institute (ADI, Jianzhu Shejiyuan, 建筑设计院), a socialist Work Unit (Danwei, 单位) for architectural practice under the planning economy, UADI was a product of Education Revolution (Jiaoyu Geming, 教育革命). Through combining pedagogy with production, it aims at replacing the old architectural education system based on market economy and Capitalist humanities with a new Socialist one serving for the proletarian politics and industrialization agenda.

1. 1958-1977 EDUCATION THROUGH PRODUCTION

Architect as a modern profession emerged in China till 1850s when British Architects opened architectural companies in the international settlement of Shanghai.[1] The first Chinese architectural department was established seventy years later, in 1923 in Suzhou, Jiangsu Province. Before 1949, both the educational and professional systems for architect were following the western model since the first generation of Chinese architects, some also founders of Chinese architectural departments, were mainly educated from U.S., Europe and Japan. Consequently, knowledge in art and humanities and individual creativity were highlighted in curriculum and seen as guarantee in winning market competition and academic accomplishment.

In the first thirty years of the communist regime, the entire professional organization and educational institution underwent radical reforms, coincided with numerous political movements. In order to achieve quick socialist transformation and rapid industrialization, following the Soviet Union model of planning economy and centralized governance, private design companies were nationalized into ADI. Ministry of Construction Engineering (Now Ministry of Construction) and its provincial and municipal agencies served as policy-maker and planner for infrastructural construction, as well as administrator for ADI and similarly nationalized construction enterprises. Instead of winning from market competition, projects were designated by government and design fee was cancelled. Most ADI were guided by a special ministry of the central government or a province/a province level municipal to serve efficiently for a special field or geographic region. They were big and comprehensive practice entities where hundreds of architects, civil and equipment engineers working together equally as technicians, even the title of architect was replaced by engineer.

Meanwhile, universities of various origins were assembled into state-owned universities and relocated in six administrative districts, Northeast, East China, South China, Northwest, Middle

[1] Shiling Zheng 郑时龄, *The Evolution of Shanghai Architecture in Modern Times 上海近代建筑风格* (Shanghai ,1999), p.80

South and Southwest. To meet the urgent demand of advanced technicians, most universities were gigantic polytechnic institutes combining related science and technology subjects, majors in humanities were largely limited. Through unified examination, selection and admission, engineering students doubled from 1950 to 1953, reaching 29,600, 42.6% of the whole freshmen population. [2] [2]Youth from worker and peasant's families were given more privilege to enter university. Under such a circumstance, eight most influential architecture schools in China till now were shaped, mostly in 1952, including that of Tsinghua University, Nanjing Institute of Technology (now South East University), Tongji University, Tianjin University, South China Institute of Technology (now South China University of Technology), Chongqing Institute of Civil Engineer and Architecture (now Chongqing University), Xi'an Institute of Architecture Engineering (now Xi'an University of Architecture & Technology, 1956) and Harbin Institute of Architecture Engineering (now Harbin Institute of Technology, 1959). The faculties and students of these universities had diverse origins. The most extreme case is that the architecture department of Tongji University was a mixture of thirteen architecture or civil engineering departments from Southeast China, among which the most powerful were architecture departments from two former Christian universities, St. Johns's University and Hangchow University, and the civil engineering department of former state-owned Tongji University.[3]

Organized by the local ministry of higher education, architectural professors, most of whom once founded or co-led a private practice, started their collective work in architectural design agency named after university in 1953, in order to build quickly teaching and dormitory facilities for their own largely expanded university and other reorganized universities and institutes in surrounding area. Since private business became illegal, university design agencies administrated and commissioned by government were the only venue for continuing their practices. Under the guidance of these experienced professionals, young teaching assistants and students had contributed notably to the production. Nevertheless, this practice mode failed soon because of the inevitable confliction between educating and producing.

In 1958, one year after the Sino-Soviet split, China started the Great Leap Forward movement with the propaganda slogan, "surpassing the British Kingdom in 7 years and the United States in 15 years". The whole society was thus turning into a big factory, not excepting universities. The Higher Education Policy followed MAO Zedong's direction, "education must serve for the proletarian politics" (Jiaoyu Bixu Wei Wuchan Jieji Zhengzhi Fuwu，教育必须为无产阶级政治服务) and "Education must combine with production and labour"（Jiaoyu Bixu Yu Shengchan Laodong Xiang Jiehe，教育必须与生产劳动相结合）, which revealed the goal

[2] Xuewei YANG 杨学为, *Documents on the History of Chinese Examination, Vol. 8 , People's Republic of China 中国考试史文献集成第 8 卷中国人民共和国*（Beijing, 2003）,pp. 290-294.

[3] Xiahong HUA 华霞虹& Shiling ZHENG 郑时龄, *60 Year of Tongji University Architectural Design Institute 1958-2018 同济大学建筑设计院 60 年*(Shanghai, 2018), pp.14-15.

and strategy for socialist transformation. To achieve Great Leap Forward in education, research and production, UADI was inaugurated successively in universities with strong architecture and civil engineer departments. In March 1958, following the model of university-affiliated hospital, Tongji University-affiliated Civil Engineer and Architecture Design Institute was formally established, including totally 107 professors, among which, 59 architects, 29 civil engineers, and more than 100 senior students from these two departments. [4] In July, South China Institute of Technology built Architecture Design Institute in architecture department and Architectural Construction Company in the civil engineering department. In the same month, Civil Engineer and Architecture Design Institute of Tsinghua University was established and then played an important role in co-designing the "Ten Great Buildings" dedicating to the 10th Anniversary of the state.

Different from other big design institutes, UADI must produce both drawings and professionals. New curriculum designated three stages of internship in UADI or local ADI where the design project was located, including two-semester or eight-month for the senior students, one-semester or four-month independent project for the graduates, and graduate program focusing on the design practice of particular programs. If in a former atelier or design studio, professor was the authoritarian center, students improved professional skills through imaginative projects, majorly independent house or public mansions, in which aesthetic criteria and individual creativity were highly valued. By contrast, in UADI, professors and students worked together on "real sword and gun projects" (Zhendao Zhenqiang Gongcheng, 真刀真枪工程), frequently included the People's Commune, factories and worker's villages. finding solutions through plentiful investigation, field work and even building construction. A good design should be "practical, economical, beautiful under possible conditions"(Shiyong, Jingji, Zai Keneng de Tiaojian Xia Zhuyi Meiguan, 实用、经济、在可能的条件下注意美观). With this institution, university contributed directly to the socialist construction, meanwhile replacing the traditional theory-oriented educational system, a leftover from the "corrupted Feudalist or Capitalist society" with an advanced practice-oriented one. The privilege of mental work to physical work was consequently demolished. Instead of an artistic creator and entrepreneur, architect was expected to be "red and expert" (Youhong Youzhuan, 又红又专), on one hand executing the planning and administration for the government as a state server (Guojia Ganbu, 国家干部), on the other hand mastering all skills of an architect, engineer and budget account as an "all-inclusive" (Yiganzi Daodi, 一竿子到底) technician.

In July 1958, professor WU Jingxiang (吴景祥 1903-1994) from Tongji University, who was also the first head of its UADI published a paper in The Journal of Architecture (Jianzhu Xuebao, 建筑学报) with the title "Part-teaching Part-producing was the Best Way to Combine Theory with Practice"(Bian Jiaoxue Bian Shengchan Shi Lilun Lianxi Shiji de Hao Fangfa，边教学边生产是理论联系实际的好方法). WU acclaimed, only through ideological liberation

[4] Ibid, pp.54-55

and technological innovation, could the socialist construction be achieved in a "more, quick, good and economical" (Duo Kuai Hao Sheng, 多快好省) way. For example, the "Four Together Method"（Sibianfa, 四边法）, which integrated the design of producing line and building, excavation and planning was more efficient than conventional routine with successive consequences.[5] Statistics showed that from 1958 to 1963, UADI of Tongji University had completed 476 buildings, covering a gross area of 60-million square meters, among which, 327 were industrial projects, 149 were civil projects, the building programs varying from educational facilities to public landmarks like 3000-Seat Opera House, 80,000-Seat Stadium, Memorial Hall of Revolutionary History etc. [6] Technology breakthroughs crowned the productive achievements. For instance, through investigating old Lilong houses, young professionals and students created independent kitchen and bathroom for small apartments with humble standard of four-square-meter each person, improving the Soviet-Union residential units. They created new methodology for sight analysis and seat design in large auditorium and stadium and achieved large-span rein-forced concrete thin shell structure. This triumph and "New Principle of Socialist Construction" was far beyond imagination for traditional architectural education system. In fact, maximizing the technological achievements was the best choice, maybe also the only way to avoid overwhelming ideological criticize towards architectural styles prevailing in the whole country then.

UAID and the education revolution of architect had led to the anti-elitism, pragmatism and efficiency-orientation of Chinese Modern Architecture. However, one can't deny that there was a big gap between production and education. Architect turned into anonymous technician busy in bureaucratic design production. Without enough qualified professionals and practicing time, UADI possessed limited capacity to handle big and sophisticated projects. The students had to sacrifice their time for comprehensive and advanced knowledge in repeating simple building types and rushing for standard construction drawings, even physical labour.

Like many other institutions, UADI was shut down during the Culture Revolution between 1966-1976, when professors and senior technicians were sent to rural labor camps to receive socialist reeducation. However, the practice oriented educational revolution climbed on a new stage, calling for the trinity of education, design and construction (Jiaoxue Sheji Shigong San Jiehe, 教学设计施工三结合) . University entrance relied on recommendation and political review instead of academic examination, therefore young worker, peasant and soldier (Gong nong bing, 工农兵) with good practicing experience and completed middle school study had the best chance to get degree in maximum three-year's training. Actually, due to its Capitalist ideology and exploiting class lifestyle connection, Architecture major was canceled and

[5] WU Jingxiang 吴景祥, "Part-teaching Part-producing was the Best Way to Combine Theory with Practice" 边教学边生产是理论联系实际的好方法, *The Journal of Architecture 建筑学报* , 1958(7), p.39

[6] History of Tongji University Editor Board《同济大学志》编辑部, Tongji University 100-year History (1907-2007)同济大学百年志 (Shanghai, 2007) ,pp.1833-1853

merging into Architectural Engineering department. Junior faculties and students were living and working together with other technicians and construction workers on the building fields of “Typical Projects (Dianxing Gongcheng, 典型工程)” of various types, mostly factories and worker’s residences.

2. 1978-2000 AN EXPERIMENTAL FIELD FOR ARCHITECTURAL CREATION AND INSTITUTIONAL REFORM

In 1977, DENG Xiaoping re-initiated Gaokao (高考), Chinese university entrance examination after a ten-year hiatus due to the Culture Revolution. Chinese university returned to the normal track as a center for intellectual enlightenment, professional training and scientific research. When reestablished after 1978, UADI divorced with architecture department, faculties and students were liberated from production burden while remaining the channel to practice.

The Ministry of Education decided to keep this institutional form for at least three reasons. First is the shortage of qualified architects and engineers resulting from the ten years’ halt of higher education. Second, to speed up the construction of university infrastructure, UADI was the most efficient and experienced agency. Last but not least, through real practice and design research, educators can redefine the academic field and improve teaching and researching. The first five Architectural Design and Research Institute named after their mother universities (UADRI) was officially approved to establish in August 1979, including Tianjin University, Tongji University, Nanjing Institute of Technology, South China Institute of Technology and Middle China Institute of Technology (now Huazhong University of Science and Technology).[7] Many others followed. The research function was emphasized in the new name.

Driven by the anxiety for correcting the ideological mistakes and catching up with the world, Chinese society in 1980s underwent a widespread cultural revival. all academic areas were struggling for new theories and disciplinary breakthroughs. In architectural field, “Creation (Chuangzuo, 创作) replaced “Production” to be the hottest key word. The dominance of industrial buildings was replaced by various public constructions. Architectural design was no longer collective mechanical practice of functional arrangement, technological and economic calculation, conceptual, formal and spatial innovation was largely encouraged. No doubt for the education of architect, individual genius of artistic and cultural expression was seen again as valuable.

In this cultural turn, university professors not only played a major role in importing modernism and postmodernism architectural theories, updating the pedagogy system for architecture discipline, but also created a new peak of original design and regional practice. Compared with

[7] Document from the Ministry of Education (79) No. 367, Announcing “The Decision on establishing Architectural Design and Research Institute in five Higher Education Schools” 印发“关于在天津大学等五所高等学校建立建筑设计研究院的决定”的通知

those large ADI administrated by the municipal government, UADRI had much less employee and relatively weak technological strength and construction knowledge. Therefore, university designers were gradually specialized in small and medium scale educational, cultural and institutional projects, usually commissioned by local governments or different institutes. These projects with limited bougets ask for more spatial and formal innovation than technological breakthrough, majority of which succeeded in a creative intervention with the natural or urban context and resulted in critical regionalism.

Many influential university architects completed their signature projects in this historical period, characterizing in transforming traditional culture symbol and applying vernacular building elements in new design. For instance, in Tongji University, FENG Jizhong (冯纪忠 1915-2009), the head of architecture department from 1955 to 1981 designed Fangta Garden (方塔园) and Helouxuan Tea House (何陋轩) in Songjiang district, Shanghai (1979-1986), a modern architectural and landscape master piece integrating aesthetic and spatial spirit from Chinese traditional garden and vernacular buildings in Yangzi Delta Area. GE Ruliang (葛如亮 1926-1989) and his colleague LONG Yongling (龙永龄, 1936-2015) designed Xixi Villa (习习山庄 1980-1982) in Jiande, Zhejiang Province, an entrance pavilion and tea house for a Karst Cave Scene with zigzag axis, inspired by vernacular temple, and modernized vernacular roofs and mason crafts. In Tsinghua University, WU Liangyong (吴良镛 1922-) completed Juer Hutong (菊儿胡同 1992) in Beijing, transforming the vernacular courtyard houses into Multiple-story modern residential community. GUAN Zhaoye (关肇邺 1929-) finished the Extension of the Tsinghua University Library which extended historical context in space, form and material (1993). In Sounth East University, QI Kang (齐康 1931-) completed Nanjing Massacre Memorial Hall (南京大屠杀纪念馆 1985-1996), stimulating strong sympathy to 300,000 victims in the historical disaster through spatial and material organization. In Tianjin University, PENG Yigang (彭一刚 1932-) finished the campus planning and the design of the Architectural Department Building. In South China University of Technology, MO Bozhi （莫伯治 1914-2003） , a junction professor from UADRI and HE Jingtang (何镜堂 1938-), later the head of both architectural School and UADRI from 1997-2008, designed the Museum of the Nanyue King's Mausoleum（南越王墓博物馆 1993）, Guangzhou. Due to their significant academic and professional contribution, all mentioned professor architects except for FENG and GE from Tongji University had been erected as member of Chinese Academy of Engineering in 1990s, while WU Liangyong is also a member of the Chinese Academy of Sciences.

Private practices named after their founding members take individual creativity as main strength for market competition. By contrast, Chinese ADI belongs to big and comprehensive design corporation where designers are working collectively and largely anonymous, except for very few distinguished master architects who later established inside the institute their own design studios or led the Creative Center (Chuangzuo Zhongxin, 创作中心), a department specializing in concept design. But in this early market period, with limited international

competitions, those UADRI affiliated with the top architectural universities showcased advantages in winning design competitions. Those professors' studio, in which the creativity is a mixture of the fame and capacity of the leading professor, and the talent and energy of their young teaching assistants and graduate students were the biggest contributors. A noteworthy reason is the expanding size for graduate education as well as architectural departments in Chinese universities since 1990s. Through plenty of practices, some leading professors finally launched new academic fields, such as Urban Design, Architectural Programming, Historical Preservation, etc., while those young designers finally grew into the most fruitful Chinese architects in the new millennium.

In addition to the professional growth, the last quarter of twentieth century has also seen series of organizational and economic reforms in UADRI, coinciding with the central government's administrative demanding for business license, market competition, professional registration etc. Firstly, since 1984, UADRI started a financial independence from the university, searching for projects and profit from market competition instead of top-down planning and admission. To expand the market, UADRI from those prestigious universities also opened branches in coastal cities with Special Economic Zone. In the distribution reform, the mother university shared at least one third of the total design output, while the individual 's income resulted from his/her own productivity instead of the university distribution based on faculty's professional hierarchy. Thanks to the rapid urbanization, for the following three decades, UADRI grew rapidly as all the other ADI, and architectural design kept in the high-paying Career List in China. Furthermore, in 1990, the Ministry of Education completed a Total Quality Control System for UADRI under its domain to update their technological capacity to win market competition.

Encouraged by the economic booming in 1990s, on one hand, whether the University-affiliated Science and Technology Company could enter the stock market was even seen as a symbol of academic and social influence for a top university, on the other hand, special tax policy stimulated university centered economic zones, university faculties and young graduates were all enthusiasm in running small practices. The fame of a university was turn into a golden brand for all university affiliates, nevertheless, this liberation also led to administrative troubles. In 1996, the Ministry of Construction and the Ministry of Education released a document, criticizing that the professional mixing of educators and designers had resulted in market disorder and low design quality, thus calling for a strict and urgent regulation of design market and business license in universities. [8] For each university, only one design license was permitted. In the same period, the registration system of Chinese architects was launched. Although this system was referencing its western counterparts and paved the road for the open-up of architectural design market, the majority Chinese registered architects leaving their stamps in a big institute instead of open their own private practice. A university faculty could sign a design contract and stamp the legal construction drawings only when they were also employed by UADRI. This combination between individual professionals and institutions,

[8] Notes on reforming the regulation of design license usage in universities by The Bureau of Education in 1996

either ADI or university showcased that Chinese Socialist Market was systematically centralized. The architectural design market was dominated by former state-owned institutes and enterprises.

3. 2001-2018 THE COORDINATION OF PRODUCTION, EDUCATION AND RESEARCH IN THE CONTEXT OF RAPID URBANIZATION AND GLOBALIZATION

In the first decade of the new millennium, the urbanization rate in China climbed from 36.2% to 47.5% with the urban built areas expanding in 7.01% every year, the average annual GDP increase reached 9.9%. Furthermore, China won the bid to host two international big events, 2008 Beijing Olympic and 2010 Shanghai World Expo. When the design market was opened after entering WTO, China undoubtedly became the largest architectural market in the world. Stimulated by this economic booming and rapid urbanization, more than 300 universities started architectural education. UADRI affiliated with renowned universities underwent a dramatic growth both in size and profit. Statistics collected by the university branch of China Engineering and Consulting Association (CECA)[9] showed that from 2004 to 2013, the average staff population grew in 14% every year, while the annual profit growth reached above 20%, with a per-capita production value of more than 600,000 Chinese Yuan (CNY). At the end of 2018, THAD, CQAD and ZJAD all own over 1000 employees, while TJAD even boasts more than 3000.

Meanwhile, in a global transforming towards knowledge economy, following the guidance of "Science and Technology are Primary Productive Force", National University Sciences and Technology Park (NUSTP, Guojia Gaoxiao Kejiyuan, 国家高校科技园) and University-centered Design and Creative Industrial Cluster (UDCIC, Huandaxue Sheji Chuangyi Jijuqu, 环高校设计创意聚集区) were mushrooming in China. Through integrating production, education and research, UADI became a representative of these university-centered industries, exhibiting strong and incessant economic and cultural power.

[9] At the end of 2004, the university branch of China Engineering and Consulting Association (CECA) was established. Till 2017, 54 university-affiliated design and research institutes have enrolled as member in, covering various professional fields such as architecture, urban planning, landscape, civil engineering, infrastructure, geological survey, nuclear energy etc., while 94% programs are of Architectural design and civil engineering. In CECA, seven UADRIs under the umbrella of universities directed by the Ministry of Education can be listed as the first tier, including Tsinghua University Architectural Design and Research Institute Co. Ltd (THAD), Tianjin University Research Institute of Architectural Design and Urban Planning (TJADUP), South-east University Architectural Design and Research Institute Co. Ltd (SEUAD), Tongji University Architectural Design and Research (group) Co. Ltd (TJAD) , The Architectural Design and Research Institute of Zhejiang University Co.Ltd (ZUADI), South China University of Technology Architectural Design and Research Institute (SCUTAD) and General Research Institute of Architecture & Planning Design Co. Ltd, Chongqing University (CQAPDI). China Engineering and Consulting Association University Branch 中国勘察设计协会高等院校勘察设计分会编制, Report on development of University-affiliated Engineering and design and Research Institues 高等院校勘察设计研究院发展研究报告（2004－2013）2014 年 4 月

Firstly, by cooperating with their colleagues majoring in urban planning, UADRI made great fortune in new city/town planning and urban designing, grasping more opportunities to design administration centers and adjacent public facilities. They also contributed significantly to the booming of new campus city and university park in the suburban area. For example, from 1998 to 2007, TJAD won approximately 150 university planning and architectural projects all around the country.[10] While SCUTAD has designed more than 300 new campuses and built at least 100 from 2000 to 2009. [11]

Nevertheless, when more and more cities falling into the signature building fetish stirred by those national landmarks designed by international superstar architects, for instance Paul Andrew's National Grand Theater, Herzog & De Meuron's National Stadium (The Bird's Nest), Rem Koolhaas and OMA's CCTV Tower etc., Chinese architects in ADIs gradually lost their chance for original conceptual design in significant public programs as in 1990s, instead they once again serving as technicians busying in construction drawings known as Local Design Institute (LDI), which is a privilege owned only by companies or institutes with local first class license.

Under this increasing pressure of international market competition, UADRI still boasts strength for several reasons. Firstly, many senior experts in state-owned top universities, especially those academy members and prestigious professors are designated by the local government as consultants for policy making, urban planning and project reviewing, university as a whole think tank has better chance to participate in the early investigation and research. For example, thanks to the first Expo Research Center established in Tongji University, together with sibling departments and institutes, TJAD finally completed 53 projects, 138 buildings for Shanghai World Expo, covering a gross area of 737,000 M^2. They had cooperated with designers from 21 different countries. [12] Secondly, UADRI also plays an important role in both domestic and international aid constructions supported by Chinese government. Compared with commercial design companies, university professionals have better chance to lead volunteer designs which possesses more social and academic meaning than commercial interest. For instance, after Wenchuan Country in Sichuan Province suffered from a tremendous earthquake in May 2008, in addition to new city planning and residential constructions, the Ministry of Education also organized seven UADRIs of state-owned top universities, including THAD, TJAD, SEUAD, TJADUP, ZUADI, SCUTAD and CQAPDI to provide school aid architectural design, finally built 32 public schools. They also edited guidelines and illustrated reference to guide the rebuilding of campuses with good efficiency and quality. [13] From the 1950s to 2015, " Over

[10] Xiahong HUA 华霞虹 & Shiling ZHENG 郑时龄, 2018, pp.288-289

[11] HE Jingtang 何镜堂, ed. *Theory and Practice of Contemporary Campus Planning* (Beijing, 2009)

[12] Xiahong HUA 华霞虹, Shiling ZHENG 郑时龄, 2018, pp.318

[13] Ibid: pp.315-316

2,000 aid projects had been delivered to more than 160 countries worldwide."[14] In this national task of architectural aid in exchange political support, UADRI also contributed a lot.

Last but not least, with a regional geographic and cultural diversity and distinctive vernacular building heritage, architectural survey and research in vernacular buildings are listed in the curriculum of Chinese architectural schools. With less burden in routine production and commercial pursue, and more academic research pressure and student resources, academic professionals are frequently participated in practice and consultant in historical preservation and regeneration. Therefore, supported by UADRI, professors' studio has more advantages in dealing with historical and cultural projects, in which design works only after multidisciplinary research, knowledge of anthropology, religion, language etc. could all matter. Since many such projects have political and cultural significance, university professionals could serve as the representative for the government. Actually, historical preservation was first established as a new major in China in 2005 when there was an increasing demanding for architectural renovation and urban regeneration.

In addition to sharing the top university brand, authorized license and collective academic and professional prestige, UADRI has also benefited from the postgraduate education. Compared with normal ADI, more senior architects and engineers are assigned as master and doctoral advisors by the university. For example, at the end of 2018, there are 29 master advisors and 2 doctorial advisors in TJAD, from 2001 to 2018, under their supervision, totally 452 thesis were finished, including 22 doctoral dissertations.[15] Consequently, small design and research studios are easier to build in UADRI, where professors can integrate production, education and research to achieve higher academic accomplishment and social influence, and young talents are also easier to be attracted. They can focus more on the concept design and technological experiment, leaving the construction drawing to other departments. Supported by those doctorial and master dissertations as well as related research programs and publications, UADRI gains better chance to enjoy favored tax policy as High Tech Enterprise.

4. CONCLUSION: TOWARDS AN ARCHITECTURAL MODERNISM FOR SOCIAL PROGRESS

Although underwent dramatic transition in three historical phases, the sixty-year's evolution of UADI has illustrated Chinese universities' statue as the server for the state and society, no matter without or within market economy. Instead of searching for an alternative world by criticizing the status quo, Chinese architects tend to "conceive new possibilities from within the existing socioeconomic conditions"[16] and aim at an architectural "modernism for social

[14] Chang, W., Xue, C. and Ding, G., 2019. Architecture of Diplomacy: Chinese Construction Aid in Asia, 1950-1976. *ARENA Journal of Architectural Research*, 4(1), P.3. DOI: http://doi.org/10.5334/ajar.147.

[15] Xiahong HUA 华霞虹 & Shiling ZHENG 郑时龄, 2018, pp.407-408.

[16] "While design research in Western countries often involves speculations and representations of alternative worlds, as critiques of the status quo, in China there seems an acceptance of the task of conceiving new

progress"[17]. This situation can trace back not only Chinese intellectuals' Confucian gene and socialist collective spirit, but also the Utopian ideal and social engagement of architectural discipline, especially advocated by Modernists.

As an experimental organization for education revolution and socialist transformation, UADRI has contributed notably to legitimize this progressivism and pragmatism in Chinese architectural discipline with its early production success. The consequent practice-oriented pedagogy has been even strengthened by the souring demand for urbanization and economic growth for the last four decades. This success exhibits not only the advantage of this institutional form, the integration of production, education and research, but also the efficiency of top down governmental system, the nationalization of practice license, registration, design fee regulation and evaluation process. Nevertheless, academic professionals' high engagements in social agenda may also sacrifice their independency and criticality, which are necessary for transcending utilitarian ends to achieve original creation, theoretical reflection and disciplinary breakthrough. Therefore, the biggest challenge for Chinese UADRI now and in the future is whether and how it can contribute to university's leading role in homegrown intellectual, cultural and technological revolution.

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